

## CASE-FINDING THROUGH ANTE-NATAL SEROLOGICAL TESTS FOR SYPHILIS\*

BY

J. A. BURGESS

*West Riding Public Health Department, Wakefield, Yorkshire*

Congenital syphilis is a preventable disease, at least in theory, if not always in practice. From the public health point of view, each case of congenital syphilis represents a failure of one of the links of the preventive chain. To avoid this, Prof. C. Fraser Brockington, who in 1950 was Medical Officer of Health of the West Riding Administrative County, introduced a case-finding method which is the subject of this paper.

In this scheme, pathologists send to the County or County Borough Medical Officer of Health (or to the venereologist who undertakes the VD preventive work on his behalf) copies of all positive or doubtful positive serological reports for syphilis on specimens of blood from antenatal patients residing in his area. There is only one omission from these copy reports; the patient's name and address is never given. On receipt of a positive report, a VD health visitor or social worker is instructed to get in touch with the doctor or ante-natal clinic medical officer whose name is given thereon. The social worker offers her services to the doctor in dealing with the patient, either by having a second specimen of blood taken as soon as possible, or, if the doctor wishes it, by arranging for the patient to be examined at a VD clinic without delay. If the patient is referred to a clinic and is found to be suffering from syphilis, the social worker is usually asked to undertake the delicate task of persuading the patient's contacts to attend for examination. Finally, the venereologist informs the pathologist, in confidence, of the patient's clinic reference number and diagnosis.

If the patient is not referred to a VD clinic, the venereologist informs the pathologist of this fact.

### Results

The statistics given in this paper relate to West Riding Administrative County residents only. The geographical county of the West Riding of Yorkshire has a total population of 3·7 millions, nearly 2 million people live in the eleven cities or county

boroughs and the remainder in the Administrative County.

Although in the 15 years from 1950 to 1964 the total number of antenatal patients with positive serological tests for syphilis (STS) was 610 (Table I), the number of individuals was considerably less than this figure, because a patient who had a positive test in her first pregnancy might be reported again in each subsequent pregnancy. 499 (82 per cent.) antenatal patients with positive STS were referred to VD clinics for examination, but 111 (18 per cent.) were not so referred, either because a repeat specimen of blood gave negative STS or because the family doctor preferred to undertake the diagnosis and treatment of the patient.

TABLE I  
ANTE-NATAL PATIENTS WITH POSITIVE SEROLOGICAL TESTS FOR SYPHILIS, 1950-64

Year	Ante-natal Patients		
	Positive STS	Referred to VD Clinics	Not referred to VD Clinics
1950	40	32	8
1951	53	52	1
1952	34	32	2
1953	60	48	12
1954	41	32	9
1955	34	30	4
1956	31	26	5
1957	41	38	3
1958	27	25	2
1959	33	29	4
1960	55	35	20
1961	40	29	11
1962	47	38	9
1963	41	29	12
1964	33	24	9
Total	No.	610	499
	Per cent.	100	82

449 (90 per cent.) of the 499 ante-natal patients referred to VD clinics were found to have syphilis (Table II, opposite). The other fifty patients (10 per cent.) were diagnosed as having other treponematoses or falsely positive STS.

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TABLE II  
DIAGNOSIS OF 499 ANTE-NATAL PATIENTS WITH  
POSITIVE STS, 1950-64

Year	Diagnosis	
	Syphilis	Not Syphilis
1950	29	3
1951	49	3
1952	28	4
1953	40	8
1954	30	2
1955	24	6
1956	25	1
1957	35	3
1958	23	2
1959	26	3
1960	28	7
1961	29	0
1962	35	3
1963	26	3
1964	22	2
Total	449	50

286 (63 per cent.) of the ante-natal patients diagnosed as syphilitic were new patients (Table III). In the first 9 years of the period reviewed there were more new patients with syphilis than old ones, but in the next 6 years the situation was reversed.

TABLE III  
NEW AND OLD CASES OF SYPHILIS IN 449  
ANTE-NATAL PATIENTS, 1950-64

Year	Ante-natal Patients	
	New	Old
1950	25	4
1951	43	6
1952	25	3
1953	35	5
1954	28	2
1955	19	5
1956	18	7
1957	18	17
1958	13	10
1959	8	18
1960	12	16
1961	8	21
1962	17	18
1963	12	14
1964	5	17
Total	286	163

In the 15 years since this case-finding method was introduced, 517 contacts of ante-natal patients were examined at VD clinics, and 77 (15 per cent.) of these contacts were found to have syphilis (Table IV), at least three being infants less than 1 year old.

### Commentary

In the Administrative County in 1949, the year before the case-finding method was started, five infants under 1 year of age died of syphilis and a further seven were diagnosed as suffering from the disease. When investigating these cases it was discovered that one mother during her pregnancy had attended an ante-natal clinic where a blood test for

TABLE IV  
CONTACTS OF SYPHILITIC ANTE-NATAL PATIENTS,  
1950-64

Year	No. of Contacts Examined	Diagnosis	
		Not Syphilis	Syphilis
1950	57	50	7
1951	64	54	10
1952	34	30	4
1953	56	46	10
1954	46	41	5
1955	31	25	6
1956	27	23	4
1957	49	41	8
1958	23	15	8
1959	14	13	1
1960	23	18	5
1961	20	19	1
1962	18	17	1
1963	35	31	4
1964	20	17	3
Total	No.	517	440
	Per cent.	100	85

syphilis was taken, and the result was positive. Unfortunately, she failed to attend the clinic again and she received no anti-syphilitic treatment until after her confinement, when her baby was found to have congenital syphilis. In another similar case, a general practitioner was not informed of a positive report because of an error on the part of his secretary.

The advantages of the case-finding method here described are these:

- (1) The attention of the doctor who has sent in a specimen of blood is drawn to the fact that he has an ante-natal patient with positive STS, thus preventing any risk of oversight.
- (2) The visit of a VD social worker may avoid delay, especially in areas where ante-natal clinics are held once fortnightly or once monthly. Without this service 2 valuable months may elapse before the result of a confirmatory blood test is obtained.
- (3) Ante-natal patients who, unexpectedly, are found to have positive STS and their contacts often present difficult medico-social problems. Most general practitioners are glad to have the help of an experienced social worker in arranging for them to be examined at special clinics.
- (4) The pathologist who has undertaken the examination of the ante-natal patient's blood is ultimately informed of the outcome of the case. Hence, if a specimen of blood from the same patient in a later pregnancy is sent to his laboratory, he does not need to waste time in asking for a second specimen of blood or in forwarding the patient's serum to a Reference Laboratory.

- (5) Liaison between doctors working in the different branches (*e.g.* laboratory, general practitioner, public health, and hospital) of the National Health Service is stimulated and improved.

### Summary

During the past 15 years, pathologists in the West Riding of Yorkshire Administrative County (population of 1.7 millions) have sent to the county venereologist copies (without the patients' names and addresses) of reports of positive serological tests for syphilis from expectant mothers. Thereafter, the county VD social workers have offered their services in dealing with these patients to the general practitioners and the ante-natal clinic medical officers. Of 610 ante-natal patients, 499 (82 per cent.) were referred to VD clinics and 449 were found to be suffering from syphilis. 517 contacts of these ante-natal patients were examined and 77 (15 per cent.), three of whom were infants under 1 year old, were found to have syphilis.

The advantages of this case-finding method are discussed.

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### Le dépistage des cas de syphilis par des tests sériques prénatals

#### RÉSUMÉ

Pendant les 15 dernières années les pathologistes du West Riding de Yorkshire Administrative County (population 1,7 million) ont envoyé au vénéréologiste du comté des copies des rapports (sans les noms et les adresses des patientes) des tests sériques positifs pour la syphilis chez les femmes enceintes. Par la suite les visiteuses sociales du service antivénérien du comté ont offert leurs services aux médecins de famille et aux médecins des dispensaires prénatals qui s'occupaient de ces femmes. Des 610 patientes prénatales, 499 (82 pour cent) ont été envoyées aux dispensaires antivénériens et 449 ont été trouvées atteintes de syphilis. 517 contacts de ces malades prénatales ont été examinés et 77 (15 pour cent), trois d'entre eux étant des bébés âgés de moins d'un an, souffraient de la syphilis. Les avantages de cette méthode de dépistage sont discutés.